

# **Corrected Transcript of Proceedings**

## **NUCLEAR REGULATORY COMMISSION**

**Title:** H.B. Robinson Steam Electric Plant  
Draft EIS Public Meeting - Afternoon Session

**Docket Number:** 50-261

**Location:** Hartsville, South Carolina

**Date:** Wednesday, June 25, 2003

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1 U.S. NUCLEAR REGULATORY COMMISSION

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3 H.B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

4 LICENSE RENEWAL DRAFT EIS

5 PUBLIC MEETING

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7 Wednesday, June 25, 2003

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9 The meeting was held at 1:30 p.m. at the Davidson  
10 Hall, CW Coker Auditorium, 300 E. College Avenue, Hartsville, South  
11 Carolina, Chip Cameron, Facilitator, presiding.

12 PRESENT:

13 CHIP CAMERON, FACILITATOR

14 S. K. MITRA

15 RICHARD EMCH

16 MARY ANN PARKHURST

17 BOB PALLA

18 BARRY ZALCMAN

19 DAN TANO

20 DUKE WHEELER

21 LANCE VAIL

22 SUE SARGEANT

23 SHELLY COLE

24 ALICIA WILLIAMSON

## A-G-E-N-D-A

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Public Comments

(None)

## P-R-O-C-E-E-D-I-N-G-S

(1:30 p.m.)

FACILITATOR CAMERON: Good afternoon, everyone.

My name is Chip Cameron, I'm the Special Counsel for Public Liaison at the Nuclear Regulatory Commission, and I want to welcome all of you to the NRC's public meeting this afternoon.

Our topic for today is going to be the draft environmental impact statement on an application that we received from Carolina Power & Light to renew the operating license for the H.B. Robinson Nuclear Plant.

And it is my pleasure to serve as your facilitator for the meeting this afternoon. And in that role I will try to help all of you have a productive meeting.

I just want to cover a few things about the meeting process before we get started with the substance of today's discussions. And the Staff is going to tell you a little bit more about why we are here.

But in simple terms it is to provide all of you with information, not only on the Nuclear Regulatory Commission's license renewal process, but also the findings in the draft environmental impact statement that have been prepared to help the NRC in its decision making on the request for a license renewal for Carolina Power & Light, give you information and, just as importantly, hear any concerns or recommendations that you have on the findings that are in the draft environmental impact statement.

In terms of our format for the meeting we are going to have some brief presentations by the NRC Staff, and also by our expert

1 consultants, and we are going to go to questions, for questions, to all of  
2 you after each of those presentations.

3 And then the second part of the meeting is to give any  
4 of you, who wish to, an opportunity to make some formal comments to  
5 the NRC on the draft environmental impact statement, or on NRC's  
6 license renewal process.

7 We are going to be taking written comments on the draft  
8 environmental impact statement, but we are here today to hear from you,  
9 in person, and you may hear things in a meeting today, information that  
10 will prompt you to file a written comment, or will help to inform your  
11 written comments.

12 But if you don't file a written comment, anything that you  
13 say today is going to have the same weight as a written comment.

14 And in terms of ground rules, if you wish to ask a  
15 question just signal me and I will bring you this cordless microphone, and  
16 please tell us your name and affiliation, if appropriate.

17 We have our stenographer with us today, Ed Johns, who  
18 is taking a transcript of the meeting, and that transcript will be available,  
19 from the NRC, if any of you wish to look at it.

20 And we will try to answer your questions, we will try to  
21 keep things fairly informal today, and when we get to the formal  
22 comment part of the meeting, I can bring you this cordless mike again,  
23 and you can speak from your seat, or you can come up to the podium  
24 here.

25 In terms of the agenda today, we are going to have a  
26 little formal welcome, for you. And I think if you look at your agenda for

1 the meeting it says that we were going to have P.T. Kuo with us to do  
2 that, and he is the branch chief of the license renewal branch at the  
3 NRC, where all of these decisions, and evaluations are done.

4 He, unfortunately, couldn't be with us so we are going  
5 to ask Rich Emch, who is the project manager of the environmental  
6 review on the Robinson license renewal application to do that for us.

7 Then we are going to go to S.K. Mitra, who is going to --  
8 S.K. is right here, and I will introduce them a little bit more fully when we  
9 get to that.

10 But S.K. is going to give you an overview of the license  
11 renewal process, generally, what does NRC look at in considering  
12 requests, such as the one that we have from Carolina Power & Light, go  
13 out to you for any questions, and then we will go back to Rich Emch,  
14 again, to talk about the environmental review process, questions, that  
15 you might have.

16 And then we are going to go to the heart of the meeting,  
17 which is to have Mary Ann Parkhurst, who is a senior scientist at Pacific  
18 Northwest National Lab, she is the team leader for the scientists who  
19 have gathered and analyzed the environmental information for the draft  
20 environmental impact statement.

21 Mary Ann is going to talk to us about the draft findings.  
22 We also have a special section of the environmental impact statement  
23 that is called the severe accident mitigation alternatives section. We call  
24 these SAMAs, and we have Bob Palla here, from the NRC Staff, who will  
25 speak to that, go back out to you for questions, and then Rich is going  
26 to do a summary of how to submit comments to us.

1                   And then we will see if anybody wants to make some  
2 formal comments for the record. And, with that, I would just thank all of  
3 you for being here, taking your time to come to the meeting today, and  
4 we hope that we will be able to answer all of your questions adequately.  
5 And I will ask Rich to give us a formal welcome.

6                   MR. EMCH: Everybody welcome. My name is Richard  
7 Emch, I'm a senior environmental project manager with the Nuclear  
8 Regulatory Commission, I'm the lead project manager for the  
9 environmental review for the license renewal application by Carolina  
10 Power & Light for the H.B. Robinson Steam Electric Plant, Unit 2, that is  
11 the nuclear unit.

12                   The purpose of our meeting today is to talk about, first  
13 we are going to go through a short description of the overall process that  
14 includes both the safety review, and the environmental reviews. S.K.  
15 Mitra is going to do that.

16                   We are going to go through a little bit of a description of  
17 the environmental review process, I'm going to do that. And then Mary  
18 Ann Parkhurst is going to give us a presentation to talk about the results  
19 of our review.

20                   Also Bob Palla will talk about the results of the SAMA  
21 review. Then I will come back up, we will kind of talk about where we are  
22 in the review schedule, and that will be the time when we can either  
23 accept any comments you have, or questions, or at least give you some  
24 information, description down there at the bottom, about how you can  
25 submit them later, if you are not prepared to give us any today.

1           The H.B. Robinson Plant was originally licensed for 40  
2 years of operation under the Atomic Energy Act of 1954, and the  
3 Regulations. The Regulations also allow a power plant to apply for an  
4 extension, or renewal of their license, and that is why we are here today,  
5 because Carolina Power & Light has applied for a 20 year renewal for  
6 the H.B. Robinson Plant.

7           Their current license would expire in 2010. And their  
8 application, which we received in June of 2002, is under review and we  
9 are at that stage of the environmental review now, when it is time to talk  
10 to you folks about what we have found, and what our conclusions are,  
11 and to see if you folks have any comments.

12           So that is really the central purpose of the meeting  
13 today. We were here about nine months ago, in September, right here  
14 in this room. At that time we told you we were here to do the review, to  
15 start the review.

16           We were here to get information from you folks, the folks  
17 who live around this plant, who are the most knowledgeable about what  
18 the possible impacts might be, and we were here to get your input to see  
19 what sorts of things we should closely look at, and see if there is any  
20 information we needed to know about.

21  
22           Now we've completed most of the review, and we have  
23 drawn some preliminary conclusions, and we have a lot of information  
24 that we want to talk to you about. We published the report, that we hope  
25 you will look at.

1                   And, as you probably are our most informed critics  
2 since, again, you live in the area and you are familiar with the plant, so  
3 we look forward to whatever comments you have for us.

4                   Thank you for being here, you are a very important part  
5 of this process. As a matter of fact a number of the comments that we  
6 received, in the scoping meeting, helped highlight areas that we needed  
7 to pay particular attention to in the review.

8                   With that I will turn it over to S.K.

9                   MR. MITRA: Thank you, Rich, good afternoon. My  
10 name is S.K. Mitra, and I am the project manager for the review of the  
11 H.B. Robinson Steam Electric Plant, Unit 2, license renewal application.

12                   Before discussing the license renewal process, and the  
13 Staff's safety review, I would like to talk about Nuclear Regulatory  
14 Commission and its role in licensing, and regulating the nuclear power  
15 plants.

16                   The Atomic Energy Act of 1954 authorizes the NRC to  
17 regulate the civilian use of nuclear material. The mission is three-fold,  
18 to ensure adequate protection of public health and safety, to protect the  
19 environment, and to provide for common defense and security.

20                   The NRC consists of five commissioners, one of who is  
21 the NRC's chairman, and the NRC Staff. The regulations, enforced by  
22 NRC, are issued under Title 10 of Code of Federal Regulations,  
23 commonly called 10 CFR.

24                   The Atomic Energy Act provided for a 40 year license  
25 term for power reactors, but also allows renewal of licenses. The 40

1 year term is based primarily on economic and/or antitrust considerations,  
2 rather than safety limitations.

3 Major components were initially expected to last for 40  
4 years. However, operating experience has demonstrated that some  
5 major components, such as steam generators, will not last that long.

6 For that reason a number of utilities have replaced major  
7 components. Since components and structures can be replaced, or  
8 reconditioned, plant life is really determined, primarily, by economic  
9 factors.

10 License renewal applications are submitted years in  
11 advance for several reasons. If a utility decides to replace a nuclear  
12 power plant it can take up to ten years to plan and construct new  
13 generating capacity to replace that nuclear power plant.

14 In addition, the decision to replace, or recondition, major  
15 components can involve significant capital investment. As such, this  
16 decision involves financial planning many years in advance of the  
17 extended period of operation.

18 The Carolina Power & Light Company has applied for  
19 license renewal under 10 CFR Part 54, and requests authority to operate  
20 H.B. Robinson, Unit 2 for up to an additional 20 years.

21 The current operating license of H.B. Robinson Unit 2  
22 expires July 31st, 2010. Now, I would like to talk about license renewal,  
23 which is governed by the requirement of 10 CFR Part 54 of the license  
24 renewal rule.

1                   This part of the Code of Federal Regulations defines the  
2 regulatory process by which a nuclear utility, such as Carolina Power &  
3 Light, applies for license renewal.

4                   The license renewal rule incorporates 10 CFR Part 51  
5 by reference. This part provides for the preparation of the environmental  
6 impact statement.

7                   The license renewal process defined in Part 54 is very  
8 similar to the original licensing process in that it involves a safety review,  
9 environmental impact evaluation, plant inspections, and review by the  
10 Advisory Committee on Reactor Safeguards, known as ACRS.

11                   The ACRS is a group of scientists, and nuclear industry  
12 experts, who serve as a consulting body to the Commission. The ACRS  
13 performs an independent review of the license renewal application, and  
14 the Staff's safety evaluation, and reports its findings and  
15 recommendations directly to the Commission.

16                   This slide illustrates two parallel processes. You will see  
17 one at the top of the slide, and the other at the bottom the slide. The two  
18 parallel processes are the safety review process and the environmental  
19 review process.

20                   These processes are used by NRC Staff to evaluate two  
21 separate aspects of the license renewal application. The safety review  
22 involves the Staff's review of technical information in the application of  
23 renewal to verify, with reasonable assurance, that the plant can continue  
24 to operate safely during extended period of operation.

1           The Staff assesses how the applicant proposes to  
2 monitor and manage the aging of certain components that are within the  
3 scope of license renewal.

4  
5           This review is documented in a safety evaluation report,  
6 which is provided to the ACRS. The ACRS reviews the safety evaluation  
7 report then holds public meetings, and prepares a report to the  
8 Commission documenting its recommendations.

9           The safety review process also involves two or three  
10 inspections, which are documented in NRC inspection reports. In its  
11 decision to renew the operating license the NRC considers the safety  
12 evaluation report, the ACRS report, the NRC regional administrator's  
13 recommendation, and the inspection reports.

14           At the bottom of the slide is the other parallel process,  
15 the environmental review, which involves scoping activities, preparation  
16 of a draft supplement to the Generic environmental impact statement,  
17 solicitation of public comments on the draft supplement, which we will be  
18 doing now, and then the issuance of final supplement to the Generic  
19 environmental impact statement.

20           This document also factors into the agency's decision  
21 on the application. In the safety evaluation report the Staff's document  
22 is the assessment of the effectiveness of the application's existing, or  
23 proposed, inspection and maintenance activities to manage aging effects  
24 applicable to passive, long-lived structure and components.

25           Part 54 requires the application to reevaluate those  
26 design analyses that assume 40 years of plant operations. The

1 reevaluation extends the assumed operating period to 60 years. These  
2 requirements in the evaluation are called time limited aging analysis.

3 Current regulations are adequate for addressing active  
4 components such as pumps and valves, which are continually  
5 challenged to review failures and degradation, such that corrective  
6 actions can be taken.

7 Current regulations also exist to address other aspects  
8 of the original license, such as security and emergency planning. These  
9 current regulations will also apply during the extended period of  
10 operation.

11 In August 2002 the NRC issued a Federal Register  
12 Notice to announce its acceptance of Carolina Power & Light Company's  
13 application for renewal of operating license for H.B. Robinson. The  
14 notice also announced the opportunity for public participation in the  
15 process. No petitions to intervene were received.

16  
17 This concludes my summary of the license renewal  
18 process, and the Staff's safety review.

19 FACILITATOR CAMERON: Thanks, S. K. Is the  
20 process that S.K. talked about, is it clear, for example, on what is looked  
21 at in the safety evaluation review, and what is looked at in the  
22 environmental review, any questions, anybody?

23 MR. WILSON: Yes, Chuck Wilson, TVA. Just one thing  
24 on the diagram I don't understand, maybe everybody else does. What  
25 is that line there, what is that saying?

26 MR. MITRA: This line?

1 MR. WILSON: Yes, there is an input, the Draft  
2 Environmental Report will be input to the Hearings?

3 MR. MITRA: Well, there is a hearing process after final  
4 draft of the GEIS. That hearing process, am I saying it right?

5 FACILITATOR CAMERON: Let me get this on.

6 MR. EMCH: Yes, if we have a hearing, if somebody  
7 asks for a hearing, and a decision is made to have a hearing, then all the  
8 inputs from this whole process are fair game, basically, for use in that  
9 hearing.

10

11 And, in fact, recently actually there was an  
12 environmental issue that an intervenor asked for a Hearing on Catawba  
13 or McGuire, I believe it was. So that is what that line means.

14 MR. WILSON: Thank you.

15 FACILITATOR CAMERON: Okay, great. Thanks S.K.,  
16 thanks Rich. Anybody else have a question on the overall process? We  
17 are going to get into the environmental review process in more detail.  
18 Any other questions?

19 (No response.)

20 FACILITATOR CAMERON: All right, thank you, S.K.  
21 We are going to go to Rich Emch now.

22 MR. EMCH: Thank you, Chip. We've got the first slide  
23 up. It is me, again, Rich Emch. The National Environmental Policy Act  
24 was put in place in 1969, it is probably the most, well I think it is the most  
25 significant piece of environmental legislation in U.S. history.

1                   And, basically, it lays requirements on federal agencies  
2 about how we have to conduct our review of environmental issues. It  
3 says we have to use a systematic approach that looks at all possible  
4 impacts on the human environment.

5                   We have to examine impacts, we have to look at  
6 possible ways to mitigate impacts that might be severe. We have to look  
7 at alternatives. We have to evaluate alternative sites, and just  
8 alternatives to the action that is being proposed.

9                   And we have to describe and disclose, it is a disclosure  
10 process, we have to describe all the information we find, and we disclose  
11 it, as well as it also calls for us to have public participation, which is why  
12 we had the scoping meeting, and why we are having this meeting to get  
13 input from you, the public.

14                   Basically NEPA says that we have to prepare and  
15 publish an environmental impact statement for any major federal action,  
16 one that might impact the human environment.

17                   The NRC has decided, The Commission has decided  
18 that we will prepare an environmental impact statement for any license  
19 renewal, and that is what this process is about.

20                   We issued the environmental statement in May, in draft  
21 form. That doesn't mean that it is incomplete, it just means that it is part  
22 of the process, and it will be finalized once we've had an opportunity to  
23 get and consider comments from the public.

24                   What is this all about, what are we trying to do here?  
25 Our job, in the environmental review process, is to get to the point where  
26 we can make a review against this standard.

1           This is the legal language of the standard, it is to  
2 determine whether or not the adverse environmental impacts of license  
3 renewal for H.B. Robinson Unit 2, are so great that preserving the option  
4 of license renewal for energy planning decision makers would be  
5 unreasonable.

6           Well, I'm a health physicist, not a lawyer, so I want to  
7 state that slightly different. Basically the question is, would the  
8 environmental impact of 20 additional years of operation, by Robinson,  
9 be okay? That is what we are here about, is the environmental impact  
10 okay? So that is my version of what that standard says.

11           Even if -- the whole NRC review, this is the  
12 environmental part of the review, the NRC also does a safety review that  
13 S.K. talked about, and it all comes together at the end, and a decision,  
14 by the Commission, about whether or not we are willing, whether we are  
15 going to grant an additional license to H.B. Robinson.

16           Now, just because we decide, if a decision is made to  
17 grant it, that really -- all that does is preserve the option for 20 additional  
18 years of operation. That decision, as you know, their current license  
19 doesn't expire until 2010, so the decision to actually continue to operate  
20 for those additional 20 years would be made by the company, the utility,  
21 Carolina Power & Light, in conjunction with whatever regulators are in  
22 place, state regulation agencies, and things like that.

23           Probably the biggest factor about whether they will  
24 continue to operate those 20 years, is economic issues, and energy  
25 need issues.

1                   This is a more detailed breakdown of the schedule and  
2 the process. This is the -- the bottom line of the slide that S.K. showed  
3 you a few moments ago. It starts right off, every presentation has to  
4 have a mistake, we've got it on this slide, we all missed it.

5                   The application was actually submitted in June, not July,  
6 of 2002. We noticed, we put out a notice, in the Federal Register, what  
7 we call a Notice of Intent, that says we are going to be doing an  
8 environmental review, we are going to be doing scoping, holding scoping  
9 meetings. That notice was in August of 2002.

10                  In September we came here, we met with you folks,  
11 here in this same room in September, and held the scoping meetings,  
12 and had participation by a number of people, and a number of issues  
13 were highlighted for us in that meeting.

14                  Also, during that same week, we conducted a site audit.  
15 The members of the Nuclear Regulatory Commission, and various  
16 experts, technical experts from three national laboratories were here.

17                  We toured the site, and the environs, and the plant. We  
18 reviewed documentation, we spoke with experts from the licensee, we  
19 spoke with public officials, state and local officials. We talked to local  
20 public service organizations, just gathering whatever information we  
21 could in the various areas that are important for the review.

22                  And then, of course, we held the public scoping meeting  
23 that week. In August, or October of 2002, we published the request for  
24 additional information, to the licensee. All those questions were related  
25 to the SAMA review, that is the severe accident mitigation alternatives  
26 review.

1           We received the answers to those, put everything  
2 together, and published the draft statement in May, and that is what we  
3 are here for now, is to gather comments.

4           We are still in the comment period, the comment period  
5 won't end until the end of, I believe, the end of July. And once we've  
6 gotten those comments, dealt with them, considered them, made any  
7 changes we need to, to the document, based on the additional  
8 information we might get from you folks, then we plan to publish the final  
9 statement in December.

10           And, with that, I will -- I'm sorry. We refer to it as the  
11 draft GEIS on this drawing here. Basically what we do is, it is an  
12 environmental impact statement, but we rely heavily on something called  
13 the generic environmental impact statement, which was a study that was  
14 done some years ago, where they looked at the environmental impact  
15 of all the various aspects, for nuclear power plants, across the United  
16 States, all 100 and some plants, and made judgements about those  
17 impacts, and judgements about which ones were likely to be different  
18 from plant to plant, and which ones weren't.

19           And there were a number of statements, and  
20 conclusions, that were drawn in this generic environmental impact  
21 statement. And so what we do, to simplify the process, is we actually  
22 publish a, we refer to it as a DSEIS, it is a draft supplement, in this case  
23 supplement 13 to the generic environmental impact statement, but it is  
24 specific to the Robinson plant.

25           Any questions about that process?

26           (No response.)

1 MR. EMCH: Any questions about anything I said?

2 (No response.)

3 MR. EMCH: Okay. Mary Ann Parkhurst, are you ready?

4 FACILITATOR CAMERON: Thank you, Rich. And just  
5 to make sure that everybody knows the roles of the NRC staff, S.K.  
6 Mitra, project manager on the safety evaluation part; Richard Emch,  
7 project manager on the environmental review, and now Mary Ann  
8 Parkhurst, who is with Pacific Northwest Laboratory, in Washington  
9 state, who as I mentioned before, is the team leader of the group of  
10 scientists who have evaluated the environmental impacts associated  
11 with the license renewal for Robinson.

12 And, Mary Ann, I will just turn it over to you, and then we  
13 will go on for questions on any of the specific findings.

14 MS. PARKHURST: Thank you, Chip. I'd like to tell you,  
15 now, about our information gathering process, the composition of our  
16 review team, the process we use to review the applicant's environmental  
17 review report, and the results of our draft SEIS, the supplemental  
18 environmental impact statement.

19 While developing the draft environmental impact  
20 statement, we reviewed Carolina Power & Light's environmental report,  
21 which was part of their license application.

22 For their application, they had an environmental report  
23 as part of that, and we reviewed that. We visited the plant during the site  
24 audit. We talked to federal agencies, like Fish and Wildlife Service, with  
25 regard to some of the environmental species, especially the endangered  
26 and threatened species, aspects of the overall process.

1 We talked to state agencies, including state offices that  
2 handle water discharge permits, and cultural-historical resources, and  
3 local officials, as well.

4 We also contacted tribal representatives, and local  
5 social service agencies. So we talked to many people, and we had  
6 public comment, the public scoping meeting, to hear your comments.

7 For the license renewal review we established a team  
8 made up of NRC staff, supplemented by experts on various fields from  
9 the National Laboratories.

10 This slide gives you an idea of the types of expertise we  
11 needed for this project, and we specifically used those from  
12 environmental science, those experts in land use, aquatic and terrestrial  
13 ecology, radiation protection, hydrology and water quality,  
14 socioeconomics, and historic and cultural resources.

15 Next slide, please. Our analytical approach to the  
16 license renewal process is based in the guidance in the generic  
17 environmental impact statement that Rich just mentioned. We call it the  
18 GEIS, just because it is a mouthful to say it over and over, otherwise.

19 This document identifies 92, could we have the next  
20 one, this identifies 92 issues to be evaluated for the license renewal. Of  
21 these issues 69 are considered generic, or what we call category 1  
22 issues.

23 So here we have the GEIS, and now we are going to talk  
24 about the category 1 issues, and this portion of this draft. The category  
25 1 issues are those issues that where the impacts are essentially the

1 same for all plants, or for all plants with a certain type of design, for  
2 example, those with cooling towers would have similar issues.

3 For the other 23 issues, referred to as category 2 issues,  
4 the NRC found that the impacts were not the same at all sites and these,  
5 therefore, required a site-specific review.

6 Those are the category 2 issues here, and we will talk  
7 about this here in a second. Category 1 generic issues that are  
8 applicable to Robinson were addressed. We looked at them in terms of  
9 is there any new and significant information that pertains to these issues.

10 And so, for example, we looked at the many issues that  
11 fall into the category 1 heading, looked at is there any new information,  
12 and is that information, if there is any that exists, significant?

13 If we found anything that was new and significant, then  
14 we went on to perform a site-specific analysis. If not we went on to -- if  
15 there was no specific new and significant information, we went on to  
16 adopt the GEIS conclusion, so that we didn't additionally consider the  
17 site-specific information, like starting from scratch.

18 For the category 2 options we have to actually do a site-  
19 specific analysis for the many different impacts, different types of  
20 impacts that we look at in the environmental review process.

21 Finally, during the scoping period, the public then was  
22 invited to help us with this track, where we were looking for, is there any  
23 information out there we don't have, that you may have, that we need to  
24 analyze and determine whether it is significant or not.

25 So we went through this process looking for new issues,  
26 identifying whether any of them were significant, and if there was no

1 significant information that came out of there, then we do no further  
2 analysis on that particular issue.

3 Next one, please. For each issue, identified in the  
4 GEIS, an impact level is assigned. This is described in chapter 1 of our  
5 draft SEIS document. These impact levels are consistent with the  
6 Council of Environmental Quality Guidance for NEPA analysis.

7 To be categorized as a small impact the effect would not  
8 be detectable, or would be too small, to destabilize or noticeably alter  
9 any important attribute of the resource.

10 For example, the plant may cause the loss of adult or  
11 juvenile fish at the water intake structures. If the loss of fish is so small  
12 that it can't be detected in relation to the total population in the whole  
13 lake, the impact would be considered a small one.

14 To be categorized as moderate the effect must be  
15 sufficient to alter noticeably but not destabilize important attributes of the  
16 resource. Using the fish example, again, if losses at the intake cause  
17 the population to decline, and then stabilize at a lower level, the impact  
18 would be considered moderate.

19 And, finally, for an impact to be considered large, the  
20 effect must be clearly noticeable and sufficient to destabilize important  
21 attributes of the resource.

22 So if losses at the intake cause the fish population to  
23 decline, to the point where they cannot sustain their own population,  
24 and they essentially disappear from the vicinity, we consider that a large  
25 impact.

1                   Next one, please. Regarding the organization of the  
2 draft SEIS, in chapter 2 we are looking at some general attributes about  
3 the nuclear plant, and the environment around the plant.

4                   In chapter 3 we briefly discuss that the licensee has not  
5 identified any plant refurbishment activities that would be necessary for  
6 extended operations.

7                   In chapter 4 we looked at the potential environmental  
8 impacts for an additional 20 years of operation at the H.B. Robinson  
9 Nuclear Plant, and the team evaluated the items specifically listed here.

10                  We looked at the cooling system, transmission lines,  
11 radiological aspects, socioeconomics, which also includes historic and  
12 cultural resources, as well as environmental justice.

13                  We looked at ground water use and quality, and  
14 threatened or endangered species. I will take a few minutes now to  
15 identify the results of our review. And at the end of my presentation, if  
16 you have any questions, please let me know, and I will try to answer  
17 them, or have those members of my team, that are here in the audience,  
18 try to answer them for you.

19                  Next one, please. One of the issues we looked at,  
20 closely, is the cooling system for the Robinson nuclear plant. This view  
21 of H.B. Robinson shows the unit 2 here on the left, and it shows the coal  
22 plant on the right, that is unit 1, Robinson, of course, the water body just  
23 above it.

24                  Lake Robinson was formed by impounding Black Creek,  
25 in 1958, to cool the unit 1 coal plant. The lake was constructed with

1 additional capacity for future power generation needs. And since 1970s  
2 it has been the cooling source for the Robinson nuclear plant.

3 Water from both units is discharged through a four mile  
4 cooling canal, and that cooling canal runs just this side of the lake shore.  
5 And it goes out four miles, and then enters the lake.

6 And in addition to functioning as a cooling pond, which  
7 this lake really was intended for, initially, this lake supports recreational  
8 use, and modest fishing.

9 During our site visit, last September, and during our  
10 review of the information we obtained, we specifically looked at both the  
11 category 2, the site-specific issues, as well as the category 1 generic  
12 issues, to get a better feel for the environmental aspects of this plant.

13 We listened to the scoping meeting comments, relating  
14 to the cooling system, and further evaluated some concerns regarding  
15 the temperature of the water in the warm season, in lake Robinson.

16 The water quality of the water entering the lake from the  
17 cooling canal is regulated by the South Carolina Department of Health  
18 and Environmental Control, through the national pollutant discharge  
19 elimination system, which is otherwise known as NPDES system.

20 Thermal limits are regulated through this permit, and the  
21 plant discharge is operated within these limits. We did not identify any  
22 new and significant information for any of the category 1 issues, during  
23 scoping process, by the applicant or through our review process.

24 Next one, please. The radiological impact is a category  
25 1 issue, a generic issue. But because it is often a concern to the public,  
26 I want to take just a minute and discuss how we determine that there is

1 no new and significant information that was related to the radiological  
2 impacts for the plant.

3 We looked at the radiological effluent release and  
4 monitoring program during our site visit. We looked at how the gaseous  
5 and liquid effluents were treated, and released, as well as how the solid  
6 wastes were treated, packaged, and shipped for disposal. This  
7 information is found at chapter 2 in the draft SEIS document.

8 We also looked at how the applicant determines and  
9 demonstrates that they are in compliance with the regulations for release  
10 of these effluents. And the releases from the plants, and the resulting  
11 off-site potential doses are not expected to increase on a year to year  
12 basis during the 20 year renewal term. Therefore no new and significant  
13 information was identified during the Staff's review, or in the scoping  
14 process, or the evaluation of other available information.

15 Next one, please. The last issue I would like to discuss,  
16 of those evaluated in chapter 4, is that of threatened or endangered  
17 species. A description of the terrestrial and aquatic ecology area, and  
18 the potential for endangered and threatened species in a site is given in  
19 chapter 2.

20 There are no Federally listed aquatic species that  
21 currently occur at the Robinson site, or along the transmission rights of  
22 way. The only Federally, or state listed, threatened and endangered  
23 aquatic species with a potential to inhabit waters near Robinson, is the  
24 Carolina heelsplitter, a mussel, which is historically known in the PeeDee  
25 River system.

1                   According to intensive Fish and Wildlife surveys, the  
2 population nearest the plant is found at the Lynches river, along the  
3 western boundary of Chesterfield county.

4                   Short-nosed sturgeon are listed as endangered by the  
5 Fish and Wildlife Service, as well, and the Atlantic sturgeon is listed as  
6 a candidate species for Federal listing in South Carolina. However,  
7 neither sturgeon species is known to occur in Black Creek.

8                   Bald eagles have been sighted near the Robinson site,  
9 or on the transmission line rights of way. Other Federally listed  
10 terrestrial species with potential habitat at the site included the red-  
11 cockaded woodpecker, and they have a picture of that up here, and  
12 Canby's dropwort.

13                   None of these species is known to occur at the  
14 Robinson site, or along the associated transmission rights of way.

15                   Next one, please. For all of these issues, that the team  
16 reviewed, we judged that the license renewal impacts are small. This is  
17 both for the category 1 and category 2 issues, and determined there was  
18 no new and significant information identified during the scoping, in which  
19 the public participated, by the licensee, or by the Staff.

20                   Next one. And we also reviewed two other  
21 environmental impacts. All issues for the uranium fuel cycle, and solid  
22 waste management, as well as decommissioning, are considered  
23 category 1 issues and are discussed in chapter 6 and 7, respectively.  
24 No new and significant information was identified related to these issues.

25                   Next one, please. As an important part of the EIS  
26 process we evaluated the potential environmental impacts associated

1 with Robinson, if it were to discontinue operation after its current license  
2 period. These, and other alternatives, are discussed in our chapter 8.

3 We looked at the no-action alternative. This is a  
4 scenario where the Robinson operating license is not renewed, and  
5 when the plant ceases its operation, Carolina Power & Light would  
6 decommission the facility.

7 We also looked at new power generation options,  
8 including coal fired plants, natural gas fired plants, coal fired, and new  
9 nuclear plants, and power through purchase power options.

10 We also evaluated alternative technologies such as  
11 wind, solar, hydropower, fuel cells, geothermal, wood waste, municipal  
12 solid waste, and other biomass derived fuels.

13 We looked at delayed retirement, utility-sponsored  
14 conservation, and then we looked at a combination of alternatives. For  
15 each alternative we evaluated whether the technology could replace the  
16 baseload capacity provided by Robinson, and whether it would be  
17 feasible, a feasible alternative to renewal.

18 If it appeared to have the same potential, we looked at  
19 the same types of environmental issues, as I've just described for  
20 Robinson, including land use, ecology, socioeconomics that we reviewed  
21 for the license renewal term.

22 Next one, please. What we found, in our preliminary  
23 conclusions of the alternatives, that are considered feasible, is that the  
24 alternatives, including the no-action alternative, may have environmental  
25 effects in at least some impact areas that reach moderate, or large

1 significance. For comparison the license renewal impacts were of small  
2 significance.

3 I will take questions, now, on any part of this, regarding  
4 the draft, our preliminary conclusions on the draft SEIS document.

5 FACILITATOR CAMERON: Any questions for Mary  
6 Ann? Anybody at all, questions on alternative generating technologies,  
7 anything?

8 (No response.)

9 FACILITATOR CAMERON: Okay. Thank you very  
10 much Mary Ann. Mary Ann mentioned the generic environmental impact  
11 statement, the so-called GEIS. And you all should be aware that the  
12 NRC is taking a periodic look at whether that generic environmental  
13 impact statement should be revised, at all, and there is going to be a  
14 meeting, public meeting, scoping meeting, on that potential revision, in  
15 Atlanta, on July 8th of this year, and Barry Zalzman is the project  
16 manager for that effort.

17 So if you want to know more about that please talk to  
18 Barry. Thank you very much, Mary Ann.

19 And now we have Bob Palla, who is going to talk about  
20 severe accident mitigation alternatives, which is also part of the draft  
21 environmental impact statement.

22 Bob does not work in the license renewal parts of the  
23 NRC organization, but works in the probabilistic risk assessment portion,  
24 and he is going to talk about that.

1 MR. PALLA: Hello, my name is Bob Palla, and I'm with  
2 the probabilistic safety assessment branch of NRC. I'm going to be  
3 discussing the environmental impacts of postulated accidents.

4 Section 5 of the generic environmental impact statement  
5 is entitled: Environmental Impacts of Postulated Accidents. The GEIS  
6 evaluates two classes of accidents, design basis accidents, and severe  
7 accidents.

8 Design basis accidents are those accidents that both the  
9 licensee and the NRC Staff evaluate to ensure that the plant can safely  
10 respond to a broad spectrum of postulated accidents without risk to the  
11 public.

12 The environmental aspects of design basis accidents  
13 are evaluated during the initial licensing process and the ability of the  
14 plant to withstand these accidents has to be demonstrated before the  
15 plant is granted a license.

16 Most importantly a licensee is required to maintain an  
17 acceptable design and performance capability throughout the life of the  
18 plant, including any extended life operation.

19 Since the licensee has to demonstrate acceptable  
20 performance throughout the life, the Commission has determined that  
21 the environmental impact of design basis accidents are of small  
22 significance.

23 Neither the licensee, nor the NRC, is aware of any new  
24 and significant information on the capability of the Robinson plant to  
25 withstand design basis accidents therefore the Staff concludes that there

1 are no environmental impacts related to design basis accidents, beyond  
2 those discussed in the generic environmental impact statement.

3 Now, with regard to severe accidents, the second  
4 category of accidents, these accidents are, by definition, more severe  
5 than design basis accidents, because they could result in substantial  
6 damage to the reactor core.

7 The Commission found, in the generic environmental  
8 impact statement, that the risk of a severe accident, on atmospheric  
9 releases falling onto open bodies of water, releases to groundwater, and  
10 societal impacts, are small for all plants.

11 Nevertheless the Commission determined that  
12 alternatives to mitigate severe accidents must be considered for all  
13 plants that have not done so. We refer to these alternatives as severe  
14 accident mitigation alternatives, or SAMA, for short.

15 The SAMA evaluation is a site-specific assessment, and  
16 it is a category 2 issue, as explained earlier by Mary Ann. The SAMA  
17 review for Robinson is described in section 5.2 of the GEIS supplement.

18 And let me just give some background on what we are  
19 doing in the SAMA review. The purpose of performing the SAMA  
20 evaluation is to ensure that the plant changes, with the potential for  
21 improving severe accident performance, are identified and evaluated.

22 The scope of potential improvements that are  
23 considered include hardware modifications, procedure changes, training  
24 program improvements, as well as other changes, basically a full  
25 spectrum of potential changes are considered.

1                   The scope includes SAMAs that would prevent core  
2 damage, as well as SAMAs that improve containment performance,  
3 given that core damage were to occur.

4                   Now, the evaluation process consists of four major  
5 steps. The first step is to characterize the overall plant risk, and the  
6 leading contributors to risk.

7                   This, typically, involves the extensive use of the plant-  
8 specific probabilistic risk assessment study. The probabilistic risk  
9 assessment study is also known as the PRA. This PRA is a study that  
10 identifies the different combinations of system failures and human errors  
11 that are required in order for an accident to progress to either core  
12 damage, or to containment failure.

13                   The second step in the evaluation is to identify potential  
14 improvements that could further reduce risk. The information from the  
15 PRAs, such as dominant accident sequences, is used to help identify  
16 plant improvements that would have the greatest impact in reducing risk.

17                   Improvements identified in other NRC studies, as well  
18 as SAMA analyses performed for other plants, are also considered in  
19 this step.

20                   The third step in the evaluation is to quantify the risk  
21 reduction potential in the implementation costs for each improvement.  
22 The risk reduction and implementation costs for each SAMA are typically  
23 estimated using a bounding approach.

24                   The risk reduction is generally overestimated by  
25 assuming that the plant improvement is completely effective in  
26 eliminating the accident sequences it is intended to address.

1                   And the implementation costs are generally  
2 underestimated by neglecting certain cost factors, such as maintenance  
3 costs, and surveillance costs, associated with the improvement.

4                   The risk reduction and cost estimates are used in the  
5 final step to determine whether implementation of any of the  
6 improvements can be justified.

7                   In determining whether an improvement is justified the  
8 NRC staff looks at three factors. The first is whether the improvement  
9 is cost beneficial. In other words, is the estimated benefit greater than  
10 the estimated implementation cost of the SAMA.

11                   The second factor is whether the improvement provides  
12 a significant reduction in total risk. For example, does it eliminate a  
13 sequence, or a containment failure mode, that contributes a large  
14 fraction of the plant risk.

15                   And the third factor is whether the risk reduction is  
16 associated with aging effects during a period of extended operation. In  
17 which case, if it was, we would be looking at implementation of the  
18 SAMA as part of the license renewal process.

19                   The preliminary results of the Robinson SAMA  
20 evaluation are summarized on this slide. Two hundred and sixty six  
21 candidate improvements were identified for Robinson, based on review  
22 of the plant-specific PRA, relevant industry and NRC studies on severe  
23 accidents, and SAMA analysis performed for other plants.

24                   Two hundred and eighteen of these SAMAs were  
25 eliminated during an initial qualitative screening, leaving 48 SAMAs for  
26 further evaluation. Factors considered during this initial screening

1 included whether the SAMA has already been implemented at Robinson,  
2 is not applicable to Robinson due to design differences, or addresses  
3 sequences, or failure modes, that are not risk significant at Robinson.

4 In the next phase of the evaluation a preliminary cost  
5 estimate was prepared for each of the 48 remaining SAMAs. The  
6 estimated costs were compared with the maximum attainable benefit for  
7 the plant.

8 This maximum attainable benefit is a calculated dollar  
9 amount associated with completely eliminating severe accidents at  
10 Robinson. All but 10 of the SAMAs were eliminated in this step because  
11 of their estimated costs exceeding the maximum attainable benefit.

12 A more detailed assessment of the conceptual design  
13 and cost estimate was developed for each of the remaining 10 SAMAs.  
14 None of these 10 SAMAs were found to be cost beneficial when  
15 evaluated in accordance with NRC guidance for performing regulatory  
16 analysis.

17 Now, although CP&L did not identify any cost beneficial,  
18 the NRC staff performed an independent review of the dominating  
19 contributors to risk, and identified two additional improvements that  
20 appeared to be cost beneficial.

21 The first cost beneficial SAMA involves modifying two  
22 valves in the residual heat removal system to increase their seismic  
23 capacity. Failure of these valves in a large seismic event could lead to  
24 core damage, and containment bypass.

25 This SAMA would increase the seismic capacity of the  
26 valves, and reduce their potential for failure in a large seismic event.

1                   The second cost beneficial SAMA involves installing a  
2 radiant heat shield along the electrical conduit from the dedicated  
3 shutdown diesel. A transformer fire in the switchyard could damage this  
4 electrical conduit and lead to a station blackout.

5                   This SAMA would protect the electrical cable and  
6 prevent the loss of electric power from the shutdown diesel. Neither of  
7 these SAMAs relate to adequately managing the effect of aging during  
8 the period of extended operation and, therefore, need not be  
9 implemented as part of license renewal pursuant to 10 CFR Part 54.  
10 However, CP&L is further evaluating potential implementation of these  
11 improvements.

12                   To summarize, the NRC staff's preliminary conclusion  
13 is that additional plant improvements to further mitigate severe accidents  
14 are not required at Robinson as part of license renewal.

15                   Potential improvements to RHR valves and electrical  
16 conduit heat shielding are being further evaluated as current operating  
17 license issues.

18                   Any questions?

19                   FACILITATOR CAMERON: Thank you, Bob. Questions  
20 on the SAMAs?

21                   (No response.)

22                   FACILITATOR CAMERON: Okay. Well, let's go to Rich  
23 Emch to wrap up this segment of the meeting. Rich?

24                   MR. EMCH: Let's talk about what the preliminary  
25 conclusions out of this review are. First, all the impacts, the  
26 environmental impact of all the various aspects we looked at, the 92

1 something areas that Mary Ann talked about earlier, the conclusion was  
2 that all the impacts were small. Mary Ann's definition was not noticeable,  
3 doesn't destabilize.

4 We looked at the impacts from the alternatives. The  
5 impacts for the alternatives that Mary Ann described ranged from small  
6 to large. And so, basically, on a comparison, we compared those, and  
7 we come to -- this is the same sentence that we read earlier, basically  
8 our conclusion is that it is viable, that the adverse impacts,  
9 environmental impacts for license renewal at Robinson are not so great  
10 that preserving the option for license renewal for energy planning  
11 decision makers would be unreasonable.

12 In other words, simply put as I said earlier, the impact of  
13 an additional 20 years of operation would be okay.

14 Let's recap where we are. From the slide, earlier, we  
15 talked about all the various steps. Now the step we are in, we have  
16 issued the draft, and we are in the comment period. You see it extends  
17 until the end of July, so get those cards and letters in, folks.

18 Basically from there we will review any comments that  
19 we get, look over any additional information we've received, and make  
20 any changes that need to be made to the statement, and publish it in  
21 final form in December.

22 This is how to get in touch with us. My name, Richard  
23 L. Emch, Jr. This is the phone number that I can be reached at, toll free  
24 number. The documents, the environmental impact statement, the draft  
25 environmental impact statement, we have copies of it out here on the

1 table right outside this door, for anybody who hasn't received one, and  
2 would like to see one.

3 The documents are also available at the Hartsville  
4 Memorial Library, which is about 3 or 4 blocks straight back that way  
5 (pointing over back shoulder). The library agreed to keep those  
6 documents on file for us.

7 Also if you are into the internet, this long, long address  
8 here, will take you directly to a copy of the draft environmental impact  
9 statement. I've checked it, it works.

10 And the other advantage of that is that it has an online  
11 comment form in the web version of the draft statement, so you can  
12 make comments that way.

13 You can provide comments by mail to us at this address.  
14 You can, if you just happen to be in Rockville, for any reason, you can  
15 provide your comments to us directly, by coming to this address.

16 We have an email address set up, [robinsoneis@nrc.gov](mailto:robinsoneis@nrc.gov),  
17 where you can send comments to us, that is probably the easiest, unless  
18 you are planning on making a statement here today. And, again, as I  
19 said, there is the online form.

20 With that we are finished. I want to thank everybody for  
21 coming to the meeting, and listening to our presentations, and for any  
22 of you who are getting ready to make any comments, thank you.

23 Any questions on anything I've said?

24 FACILITATOR CAMERON: Any questions on the  
25 summary, before we see if anybody has any formal comments for us?

1                   Perhaps one thing that could be added, and maybe S.K.  
2                   could add this, is that Rich was focusing on the -- when the  
3                   environmental impact statement is going to be done. And as Rich, and  
4                   I think S.K., pointed out earlier, there are a number of things that are  
5                   considered before the license renewal decision is made.

6                   And one of them is the safety evaluation report. When  
7                   will that be done, S.K.?

8                   MR. MITRA: That report will be done in January 2004,  
9                   but the final licensing, if it is viable to license, it will be done in April of  
10                  2004.

11                  FACILITATOR CAMERON: So December of this year  
12                  the environmental impact statement, SER, in January, and then it will all  
13                  come together to be considered.

14                  We didn't have anybody that signed up, today, to make  
15                  a more formal comment, or recommendation to us for the record. But,  
16                  certainly, if there is anybody in the room now who would like to do that,  
17                  we are more than amenable to hear from you.

18                  Does anybody want to make a comment, or  
19                  recommendation, on the draft environmental impact statement?

20                  (No response.)

21                  FACILITATOR CAMERON: Okay. Well, as Rich said,  
22                  thank you all for being here. The Staff is here to talk informally. We do  
23                  have, as Mary Ann said, there are members of her expert team here, so  
24                  please avail yourselves of that.

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We are going to be back for another meeting tonight at 7 o'clock, with an open house at 6 o'clock. So thank you, again, and maybe we will see some of you here tonight. And we are adjourned.

(Whereupon, at 2:40 p.m., the above-entitled matter was concluded.)